

WHAT IS CLAIMED IS

5

1. A network access control method for a network system comprising:

network apparatuses having packet filtering functions;

10 a service server connected with an IP network via the network apparatus, providing a service to a user;

a user terminal connected with the IP network via the network apparatus, for the user to
15 utilize therethrough the service provided by said service server;

a reception server connected with the IP network via the network apparatus, receiving an access from the user for said service server; and
20 an access control server controlling the network apparatus,

said method comprising the steps of:

a) said reception server receiving access request information from said user terminal, and
25 holding it; and

b) said access controlling server performing traffic control such as to extract, based on a processing capability of said service server and a traffic amount for said service server, such
30 an amount of the access request information held by said reception server as that which said service server can optimally deal with, so as to allow the access for said service server.

35

0007303.000001

2. A network system comprising:
network apparatuses having packet
filtering function;

- 5 a service server connected with an IP
network via the network apparatus, providing a
service to a user;
a user terminal connected with the IP
network via the network apparatus, for the user to
utilize the service provided by said service server;
10 a reception server connected with the IP
network via the network apparatus, receiving an
access from the user for said service server; and
an access control server controlling the
network apparatuses,
15 said reception server having an access
registering part which receives access request
information from said user terminal, and holds it;
and
said access controlling server having a
20 filtering optimizing part which performs traffic
control such as to extract, based on a processing
capability of said service server and a traffic
amount for said service server, such an amount of
the access request information held in said access
25 registering part as that said service server can
optimally deal with, so as to allow the access for
said service server.

30

3. A reception server comprising:
an access list holding access request
information from a user terminal;
35 a user profile holding user information
including a user class for each user;
an access receiving part receiving an

access from the user terminal;

an access registering part registering
access request information received via said access
receiving part into said access list in order of the
5 reception;

a user class extracting part extracting an
IP address from the received access request
information, and identifying the user by using the
extracted IP address so as to extract the user class
10 from said user profile; and

a by-user-class registering part
registering the access request information received
via said access receiving part into said access list
based on the user class extracted through said user
15 class extracting part.

20 4. The reception server as claimed in
claim 3, further comprising:

an estimated waiting time calculating part
calculating an estimated waiting time, from the
number of the users waiting, according to a position
25 of said access list at which the access request
received from the user terminal is registered; and

an access information reporting part
reporting the calculated estimated waiting time to
the user, and reporting to the user that the access
30 can be performed after the estimated waiting time
has elapsed.

35

5. The reception server as claimed in
claim 3, further comprising:

00017303-000001

an access confirming part determining whether or not the access request is to be registered in said access list, when waiting is needed, after receiving the access request from the user terminal; and

a waiting confirmation inquiring part inquiring to the user for said access confirming part to make the determination.

10

6. An access control server comprising:

15 a access information database holding
information concerning a processing capability of a
service server and a maximum permissible access
number calculated based on the processing capability
of the service server;

```

        a traffic control part controlling a
20  network apparatus;

```

a static permissible access number
calculating part calculating the maximum permissible
access number based on the information concerning
the processing capability of the service server; and

25 a filtering optimizing part reading such
an amount of access request information from an
access list holding the access request information
from user terminals in a reception server, from the
top, as that for the maximum permissible access
30 number, producing packet filtering setting
information for the users making access requests to
be able to access to the service server, and setting
the produced information in the network apparatus
via said traffic control part.

35

7. The access control server as claimed in claim 6, further comprising:

- a load and traffic monitoring part monitoring a load condition of the service server
- 5 and a traffic condition of a network apparatus holding the service server; and
- a dynamic permissible access number calculating part periodically performing communication with said load and traffic monitoring
- 10 part so as to extract therefrom information of the load condition and traffic condition, and calculate the maximum permissible access number therefrom, and, also, registering the calculated maximum permissible access number in the access information database.

15

8. The access control server as claimed in claim 6, further comprising:

- a control information database holding control information which is used as a guideline for reading the access request information from the access list; and
- 25 a by-user-class access request reading part reading the access request information from the access list for each user class based on the control information extracted from said control information database, when the filtering optimizing part reads
- 30 such an amount of the access request information from the access list as that for the maximum permissible access number, in a case where the access request information is registered in the access list by user class.

35

00017303.032501

12. The access control server as claimed in claim 6, further comprising an access unallowance filtering setting part producing, based on a report from the user authenticating part of the reception
5 server claimed in claim 11, the packet filtering setting information of access unallowance for the service server, and setting the produced information in the network apparatus.